Claims

1. A method of monitoring an immunotherapy in a subject suffering from an amyloidogenic disease, comprising the steps of:
   (a) obtaining a test sample from a subject being immunized against an amyloid component,
   (b) contacting said test sample with an amyloid plaque-containing sample,
   (c) determining the level of immunoreactivity of said test sample against amyloid plaques in said amyloid plaque-containing sample, and
   (d) comparing said level of immunoreactivity to a reference value representing a known disease or health status, or representing the status prior to onset of said immunotherapy in said subject;
   wherein an increase in the level of immunoreactivity of said test sample from said subject undergoing immunotherapy is indicative of a positive clinical outcome of said immunotherapy.

2. The method according to claim 1 wherein said amyloidogenic disease is Alzheimer's disease.

3. The method according to claim 1 wherein said amyloid component is β-amyloid.

4. The method according to claim 1 wherein said test sample is a body fluid, preferably serum or cerebrospinal fluid.

5. The method according to claim 1 wherein said amyloid plaque-containing sample is obtained from a transgenic non-human animal.

6. The method according to claim 1 wherein said amyloid plaque-containing sample is a tissue section from a transgenic non-human animal.

7. The method according to claim 1 wherein said amyloid plaque-containing sample is a brain tissue section from a non-human animal transgenic for human amyloid precursor protein (APP), or a fragment, or a derivative, or a mutant thereof, and wherein the expression of said transgene results in said non-human animal exhibiting a predisposition to developing amyloid plaques.

8. A method of monitoring an immunotherapy in a subject suffering from a neurodegenerative disease associated with the deposition of abnormal protein aggregates, comprising the steps of:
   (a) obtaining a test sample from a subject being immunized against a component of said abnormal protein aggregate,
   (b) contacting said test sample with an abnormal protein aggregate-containing sample,
   (c) determining the level of immunoreactivity of said test sample against abnormal protein aggregates in said abnormal protein aggregate-containing sample, and
   (d) comparing said level of immunoreactivity to a reference value representing a known disease or health status, or representing the status prior to onset of said immunotherapy in said subject,
   wherein an increase in the level of immunoreactivity of said test sample from said subject undergoing immunotherapy is indicative of a positive clinical outcome of said immunotherapy.

9. The method according to claim 8 wherein said abnormal protein aggregate-containing sample is obtained from a transgenic non-human animal.

10. The method according to claim 8 wherein said abnormal protein aggregate-containing sample is a tissue section from a non-human animal transgenic for a human protein, or a fragment, or derivative, or a mutant thereof, wherein said human protein is a component of said abnormal protein aggregate, and wherein the expression of said transgene results in said non-human animal exhibiting a predisposition to developing abnormal protein aggregates.

11. A kit for monitoring an immunotherapy in a subject suffering from a neurodegenerative disease associated with the deposition of abnormal protein aggregates, said kit comprising a solid phase containing on its surface an abnormal protein aggregate-containing sample.

12. The kit according to claim 11 wherein said abnormal protein aggregate-containing sample is obtained from a transgenic non-human animal.

13. The kit according to claim 11 wherein said abnormal protein aggregate-containing sample is a tissue section from a transgenic non-human animal.

14. The kit according to claim 11 wherein said abnormal protein aggregate-containing sample is a tissue section from a non-human animal transgenic for a human protein, or a fragment, or derivative, or mutant thereof, wherein said human protein is a component of said abnormal protein aggregate, and wherein the expression of said transgene results in said non-human animal exhibiting a predisposition to developing abnormal protein aggregates.

15. The kit according to claim 14 wherein said human protein is the amyloid precursor protein (APP), or a fragment, or derivative, or mutant thereof.

16. The kit according to claim 11 wherein said neurodegenerative disease is an amyloidogenic disease.

17. The kit according to claim 16 wherein said amyloidogenic disease is Alzheimer's disease.